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BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

STATE OF ILLINOIS
Pollution Control Board

IN THE MATTER OF:)
)
WATER QUALITY TRIENNIAL REVIEW)
AMENDMENTS TO 35 ILL. ADM. CODE)
302.208(c)-(g), 302.504(a),)
302.575(d), 303.444, 309.141(h);)
AND PROPOSED 35 ILL. ADM. CODE)
301.267, 301.313, 301.413,)
304.120 AND 309.157)

R02-11
(Rulemaking-Water)

P.e.#17

COMMENTS OF THE THORN CREEK BASIN SANITARY DISTRICT

The Thorn Creek Basin Sanitary District submits the following comments in support of the proposed amendment to 35 ILL. Adm. Code 304.120.

The Illinois Environmental Protection Agency ("Agency") is proposing to amend 35 ILL. Adm. Code 304.120 of the Board regulations by adding a Paragraph (g) which specifies that compliance with the 5-day biochemical oxygen demand (BOD₅) numerical standards in Section 304.120 be determined by analysis of 5-day carbonaceous biochemical oxygen demand (CBOD₅).

The District supports the proposed amendment to Section 304.120. The BOD₅ test was developed to measure the biodegradable organic matter in wastewater, since there was no easy way to directly measure biodegradable organic matter.

There are other materials that will interfere with the BOD₅ test. The ammonia-nitrogen exerts a so-called nitrogenous demand (NOD) when it is biologically converted to nitrate-nitrogen through bacterial action. Before 1970, treatment plants were not required to nitrify. When the BOD₅ test was run on secondary treatment effluents, only a minor amount of NOD would have been measured in the BOD₅ test. The current BOD₅ limits were developed using pre 1970 data and assuming BOD₅ test results were free of NOD. Once treatment plants began to nitrify, the amount of NOD measured in the BOD₅ test increased significantly. The NOD interference produced BOD₅ results that indicated the presence of much higher amounts of biodegradable organic matter than was actually present. The CBOD₅ test removes the NOD interference and restores the measurement to the Board's original intention.

By formally recognizing the use of the CBOD₅ test for measuring deoxygenating wastes under Section 304.120, the Board will be making the regulation scientifically correct with regard to its method for assessing the removal of organic matter in the secondary treatment process.

Any concerns which the Board may have regarding the removal of toxicity due to ammonia-nitrogen from municipal wastewater are handled adequately under Sections 304.105 and 304.122 of the Board's regulations.

Thorn Creek Basin Sanitary District

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